AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Canceled)

3. (Previously Presented) The nucleic acid detection method as set forth in claim 21, wherein the pre-treating step is performed by one or more methods selected from the group consisting of a detergent treatment method, an enzyme treatment method, and a heat treatment method.

4. (Canceled)

5. (Previously Presented) The nucleic acid detection method as set forth in claim 21, wherein the amplified nucleic acids are labeled in the step of performing PCR.

6. (Previously Presented) The nucleic acid detection method as set forth in claim 5, wherein, in the determining step, the nucleic acids amplified and labeled in the step of performing PCR are used as probes for complementary hybridization with known gene fragments.

7. (Previously Presented) The nucleic acid detection method as set forth in claim 6, wherein the known gene fragments are fixed on the support in advance.

8. (Previously Presented) The nucleic acid detection method as set forth in claim 5, wherein, in the determining step, the nucleic acids amplified and labeled in the step of performing PCR are used as probes for a DNA microarray.

9. (Previously Presented) The nucleic acid detection method as set forth in claim 21, wherein the sample originates in biological sources.

10. (Previously Presented) The nucleic acid detection method as set forth in claim 9, wherein the biological sample originates in humans.

11-18. (Canceled)

19. (Previously Presented) The nucleic acid detection method as set forth in claim 21, wherein the support with the divided compartments is shaped to fit a gene amplifier for PCR.

20. (Previously Presented) The nucleic acid detection method as set forth in claim 21, wherein, in the determining step, the target nucleic acid is detected by electrophoresis.

21. (Currently Amended) A nucleic acid detection method comprising:

fixing a cell-containing sample directly on divided compartments of a support by dry fixation, wherein the fixation consists of:

i) smearing the sample in the divided compartments,

ii) air-drying the smeared samples,

iii) adding 75% ethanol to each compartment, and

iv) air-drying the samples with a thermal cycler after removing the 75% ethanol;

pre-treating the sample to enable amplification of nucleic acids contained in the sample;

performing PCR by placing a PCR mixture, containing primers for amplifying a target nucleic acid, into the compartments of the support; and

determining whether amplified nucleic acids existing in a PCR solution outside of the fixed cell sample contain the target nucleic acid.

22. (Currently Amended) A nucleic acid detection method comprising:

fixing a cell-containing sample directly on divided compartments of a support by dry fixation, wherein the fixation consists of:

i) smearing the sample in the divided compartments,

ii) air-drying the smeared samples,

iii) adding 75% ethanol to each compartment, and

iv) air-drying the samples with a thermal cycler after removing the 75% ethanol;

pre-treating the sample to enable amplification of nucleic acids contained in the sample;

performing PCR by placing a PCR mixture, containing primers for amplifying a target nucleic acid, into the compartments of the support;

detecting amplified nucleic acids existing in a PCR solution outside of the fixed cell sample; and

determining whether the amplified nucleic acids are the target nucleic acid.

23. (Previously Presented) The nucleic acid detection method as set forth in claim 22, wherein the pre-treating step is performed by one or more methods selected from the group consisting of a detergent treatment method, an enzyme treatment method, and a heat treatment method.

24. (Previously Presented) The nucleic acid detection method as set forth in claim 22, wherein the amplified nucleic acids are labeled in the step of performing PCR.

25. (Previously Presented) The nucleic acid detection method as set forth in claim 24, wherein, in the determining step, the nucleic acids amplified and labeled in the step of performing PCR are used as probes for complementary hybridization with known gene fragments.

26. (Previously Presented) The nucleic acid detection method as set forth in claim 25, wherein the known gene fragments are fixed on the support in advance.

27. (Previously Presented) The nucleic acid detection method as set forth in claim 24, wherein, in the determining step, the nucleic acids amplified and labeled in the step of performing PCR are used as probes for a DNA microarray.

28. (Previously Presented) The nucleic acid detection method as set forth in claim 22, wherein the sample originates in biological sources.

29. (Previously Presented) The nucleic acid detection method as set forth in claim 28, wherein the biological sample originates in humans.

30. (Previously Presented) The nucleic acid detection method as set forth in claim 22, wherein the support with the divided compartments is shaped to fit a gene amplifier for PCR.

31. (Previously Presented) The nucleic acid detection method as set forth in claim 22, wherein, in the determining step, the target nucleic acid is detected by electrophoresis.